DOCUMENT RESUME

ED 457 015 SE 065 173

TITLE	Released Items: Missouri Assessment Program (MAP), Secondary Science, Spring 2000. Grade 10.
INSTITUTION	Missouri State Dept. of Elementary and Secondary Education, Jefferson City.
PUB DATE	2000-00-00
NOTE	10p.
PUB TYPE	Guides - Non-Classroom (055) -- Tests/Questionnaires (160)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Answer Keys; Data Analysis; Ecology; Evaluation; Grade 10; High Schools; Measures (Individuals); Mechanics (Physics); Science Education; *Tests
IDENTIFIERS	*Missouri Assessment Program

ABSTRACT

This assessment sample provides information on the Missouri Assessment Program (MAP) for grade 10 science. The sample consists of six items taken from the test booklet and scoring guides for the six items. The items assess ecosystems, mechanics, and data analysis. (MM)

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ED 457 015

RELEASED ITEMS

Missouri Assessment Program (MAP)
Secondary Science
Spring 2000
Grade 10

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Document Contents:

From Test Booklet- "Chips"
Session 1-Items 1, 2, and 3
Session 2-Items 1, 2, and 3

Scoring Guides

Missouri Department of Elementary and Secondary Education

SE 045773

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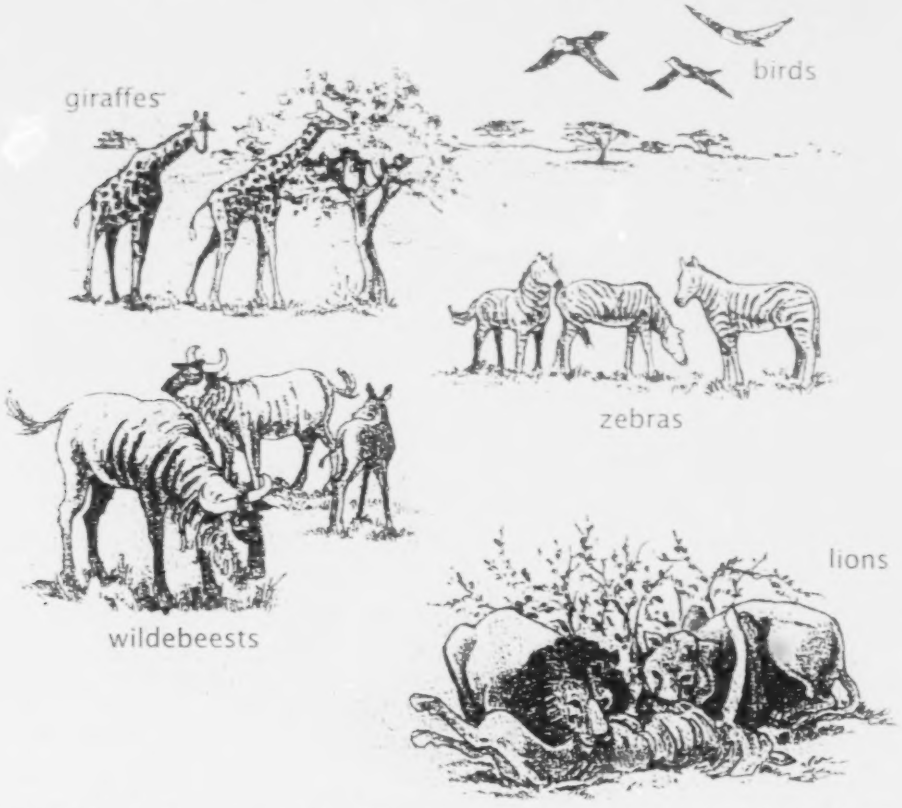
SECONDARY CONSTRUCTED RESPONSE



1. Look at the picture of an African savannah shown above. Which two species of animals are in competition within this ecosystem?

   1. _____

   2. _____

   Explain how you identified those two species as competitors in this ecosystem.

_____

_____

_____

2. Two science students are having a great time arguing about speed and acceleration as they ride a roller coaster. As they are roaring downhill, Student A screams, "Wow! What acceleration!" Student B shouts, "No, this is not acceleration. This is just going fast!" Who is correct? Explain your answer.

_____

_____

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As the ride progresses, the students go around a curve while maintaining a speed of 50 miles per hour. Student B screams, "Now this is acceleration!" But Student A replies, "No, we're still going at the same speed. That's not acceleration."

Who is correct? Explain your answer.

As the car goes uphill again, it slows down. Identify three forces that cause this negative acceleration.

1. _____

2. _____

3. _____

3. Why are we "looking in the past" when we view distant galaxies?

How can this information be useful?

SECONDARY PERFORMANCE EVENT

CHIPS

Your high school principal has announced that the school district has decided to save money by eliminating all 3 brand name potato and snack ships in the student vending machines and replacing them with one cheaper, generic brand of chips. The school can make money to help support the lunch program because the generic chips will cost the school less money and the machines will still collect the same amount of money.

You and your friends are opposed to this change because you really like the brand name chips that are in the vending machines now. You know that student preference is probably not a good enough argument to change the principal's mind. You and your friends research the different brands of chips and are able to collect the data shown below.

HIGH SCHOOL CONSUMER COMPARISONS OF BRANDS OF POTATO CHIPS

Issues to Consider	Generic Brand	Brand A	Brand B	Brand C
Main Ingredients	potato base	potato, corn, and multigrain base	potato base	potato base
Preparation Style	fried in vegetable oil	fried in vegetable oil	fried in corn oil	fried in vegetable oil
Shelf life	6 months	4 months	4 months	2 months
Cost to School	$0.30/serving	$0.35/serving	$0.40/serving	$0.50/serving
Crispiness	soggy crisp breaks too easily	soggy crisp breaks too easily	soggy crisp breaks too easily	soggy crisp breaks too easily
Size	small OK too large	small OK too large	small OK too large	small OK too large
Color	pale gold dark	pale gold dark	pale gold dark	pale gold dark
Saltiness	not enough OK too much	not enough OK too much	not enough OK too much	not enough OK too much
Greasiness	dry acceptable greasy	dry acceptable greasy	dry acceptable greasy	dry acceptable greasy

1. Analyze the information in the table on Page 3. Which brand-name chip is the best choice according to the data presented in the table?

2. In the space below, prepare a data table that you can use to show your principal the three main strengths and two main weaknesses of your choice compared with the generic brand.

3. Write a note to your principal explaining why you think the strengths of the brand-name chip you chose in Number 2 outweighs its weaknesses when comparing it with the generic brand. Be sure to discuss all the strengths and weaknesses you put in your data table in Number 2.

GRADE 10

SCORING GUIDE

SECONDARY SCORING GUIDE

CONSTRUCTED RESPONSE

1. ***Two points***—one for each answer.

   Zebras and wildebeest (are in competition)
   Any response indicating that they eat the same food (grass)

2. ***Five points***---one for each of the following:

   I. Student A—Acceleration is changing speed; The car increases speed as it goes downhill.
   II. Student B—Acceleration is changing speed and/or direction;
   The car changes direction as it goes around the curve.
   III. Gravity or weight (not both)
   IV. Friction
   V. Wind resistance/drag/air resistance/wind friction

   Note: No credit when choosing the wrong student or choosing no student
   No credit for centrifugal/centripetal force, air pressure, wind force, or wind.

3. ***Two points***---one for each part:

   I. The light from distant galaxies takes millions/billions of years to reach us.
   II. Allows us to view the universe as it existed long age;
   Can give us clues to how the universe formed;
   Can give us clues regarding the size of the universe
   Clues to formation of Earth;
   Predict future development of the universe

PERFORMANCE EVENT

1. ***One point***

   Brand A

2. ***Five points***—one for each strength and weakness.

	Brand A	Brand B	Brand C
Strengths (any 3)	• OK (salt) • acceptable (grease) • potato, corn, and multigrain base • 4 months (If justified in Item 3 on the basis that it must have fewer preservatives) • crisp • gold (color)	• OK (salt) • crisp • 4 months (if justified in Item 3 on the basis that it must have fewer preservatives) • fried in corn oil (if addressed in Item 3)	• gold (color) • 2 months (if justified in Item 3 on the basis that it must have fewer preservatives)
	Brand A	**Brand B**	**Brand C**
Weaknesses (any 2)	• $0.35/serving • 4 months (shelf life)	• $0.40/serving • 4 months (shelf life) • fried in corn oil (if addressed in item 3) • very greasy • pale (color)	• $0.50/serving • 2 months (shelf life) • soggy • dry • not enough salt

NOTE: Any weakness classified as strength or vice versa is creditworthy if justified in Item 3.
The student can draw a chart based on Brand A, B, or C regardless of which brand they chose for Item 1:

- 1 strength – 1 point each; up to 3 points
- 1 weakness – 1 point each; up to 2 points
- Subtract 1 point for each weakness classified as a strength or vice versa unless justified in Item 3
- Ignore criteria listed by the student as strengths or weakness that are the same for the generic brand
- and the chosen brand (e.g. size)
- In all cases, the number of strengths must be greater or equal to the number of weaknesses.

3. ***Five points***—one for each strength and weakness.

   Each strength of the brand chosen in Item 2 is addressed = 1 point; up to 3 points
   Reasons provided for tolerating or accepting each weakness of the chosen brand = 1 point; up to 2 points